10/506903

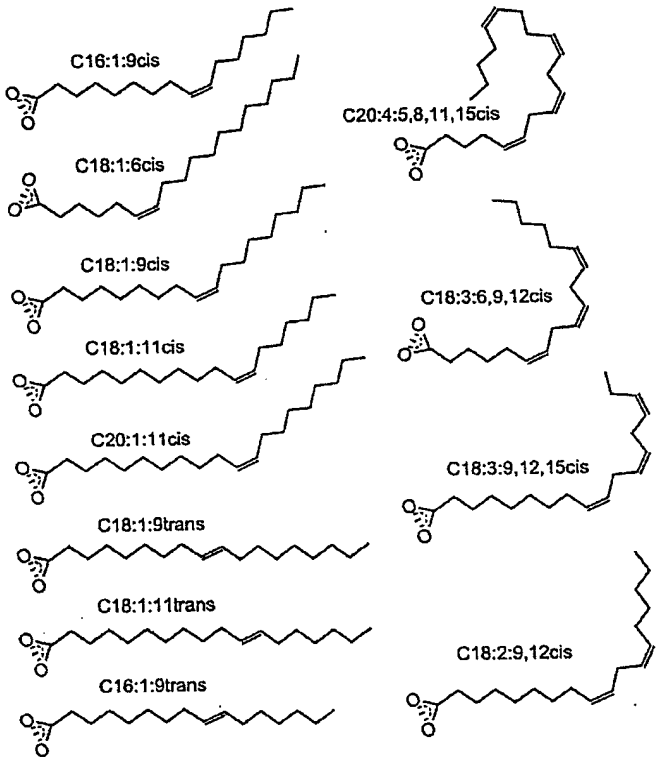

Figure 1

10/506903

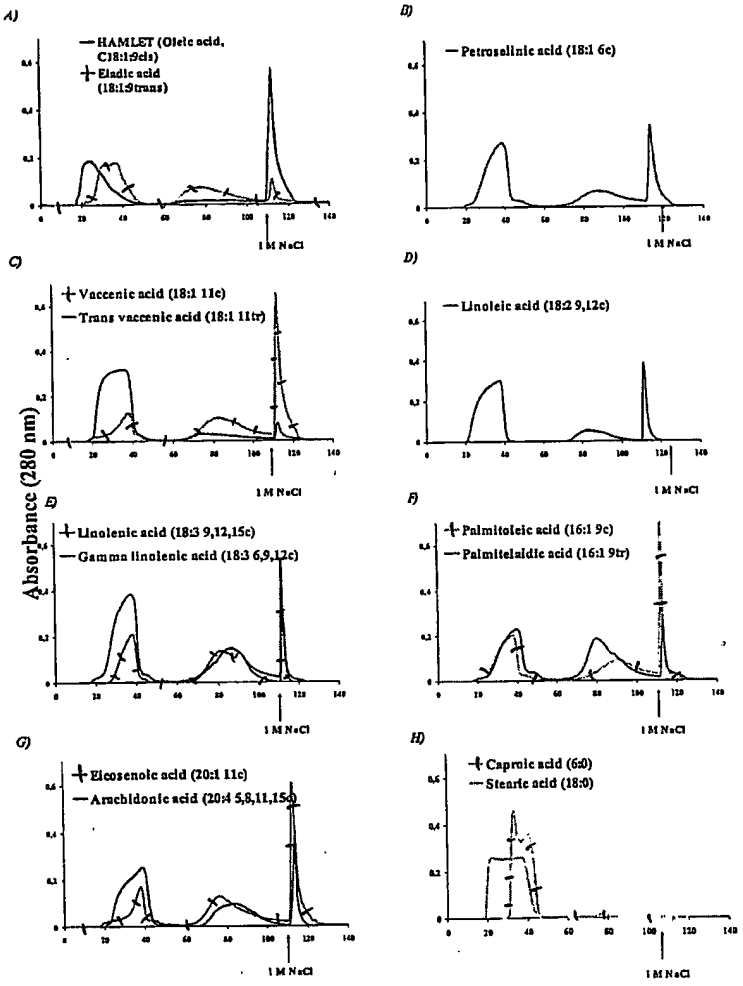

Figure 2

10/506903

a) The viability of L1210 cells after exposure to converted material and free fatty acids

	Viability (%)
Medium control	99
Fatty acid/protein complexes:	
18:1: 9c (HAMLET)	0
18:1: 9tr	98
18:1:11c	1
18:1:6c	60
18:3 c	32
γ18:3 c	43
18:1 :11tr	98
18:2 c	89
16:1:9c	73
16:1 :9tr	98
20:1:11c	96
20:4 c	96
Fatty acids:	
18:1:9c	99
18:1: 9tr	98
18:1:6c	97
18:1: 11tr	96
18:2 c	98
18:3 c	99
γ18:3 c	99
16:1:9c	96
16:1:9tr	98
20:1:11c	99
20:4 c	98

Figure 3

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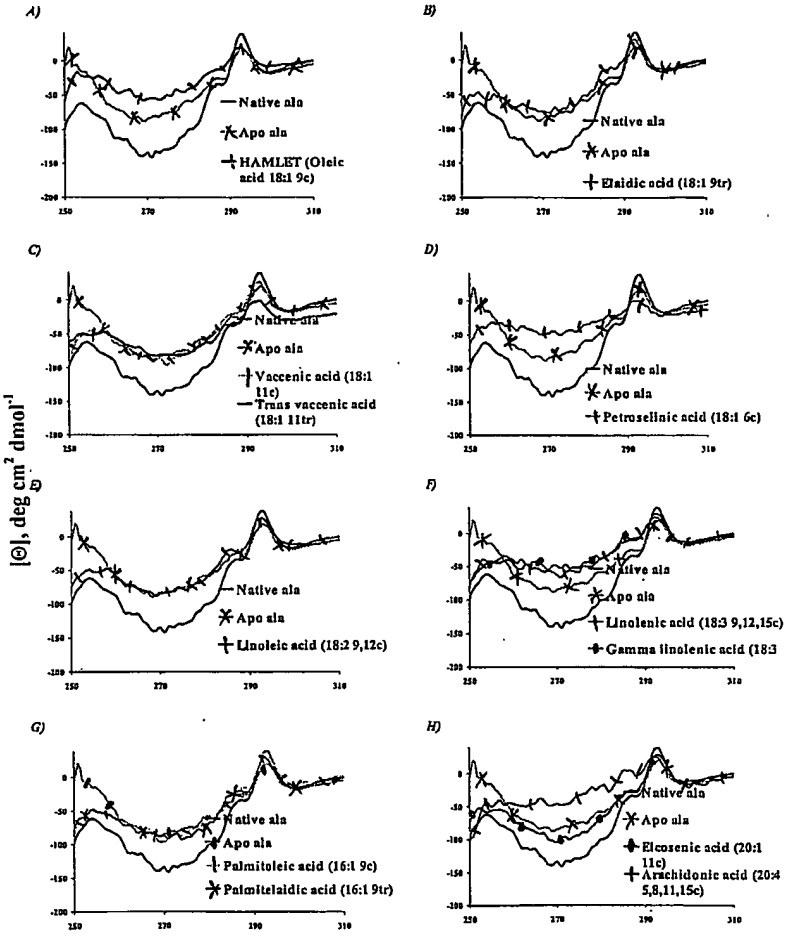
A)
Native ala
Apo ala
HAMLET (Oleic acid 18:1 9c)
B)
Native ala
Apo ala
Elaidic acid (18:1 9tr)
C)
Native ala
Apo ala
Vaccenic acid (18:1 11c)
Trans vaccenic acid (18:1 11tr)
D)
Native ala
Apo ala
Petroselinic acid (18:1 6c)
E)
Native ala
Apo ala
Linoleic acid (18:2 9,12c)
F)
Native ala
Apo ala
Linolenic acid (18:3 9,12,15c)
Gamma linolenic acid (18:3
G)
Native ala
Apo ala
Palmitoleic acid (16:1 9c)
Palmitelaidic acid (16:1 9tr)
H)
Native ala
Apo ala
Eicosenic acid (20:1 11c)
Arachidonic acid (20:4 5,8,11,15c)
[Θ], deg cm2 dmol-1
Wavelength (nm)

Figure 4

10/506903

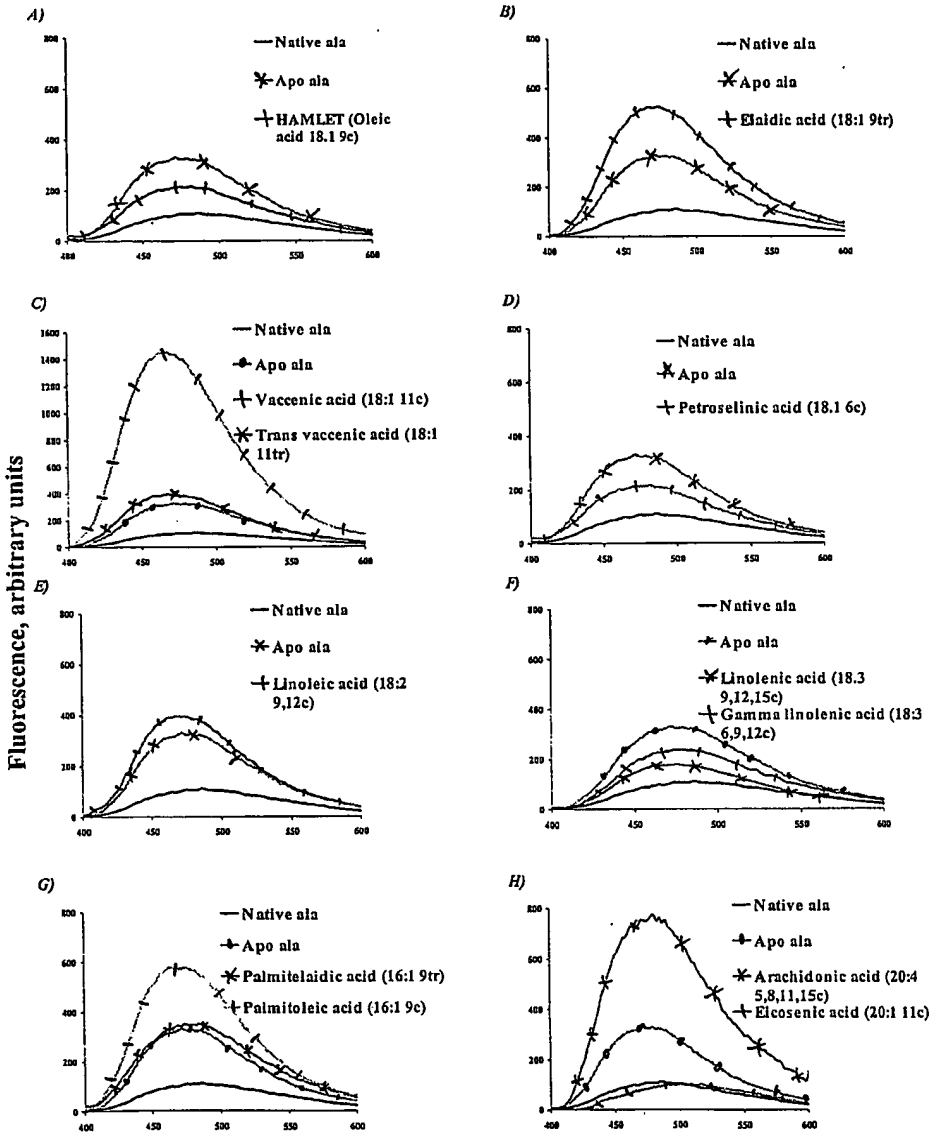

Figure 5

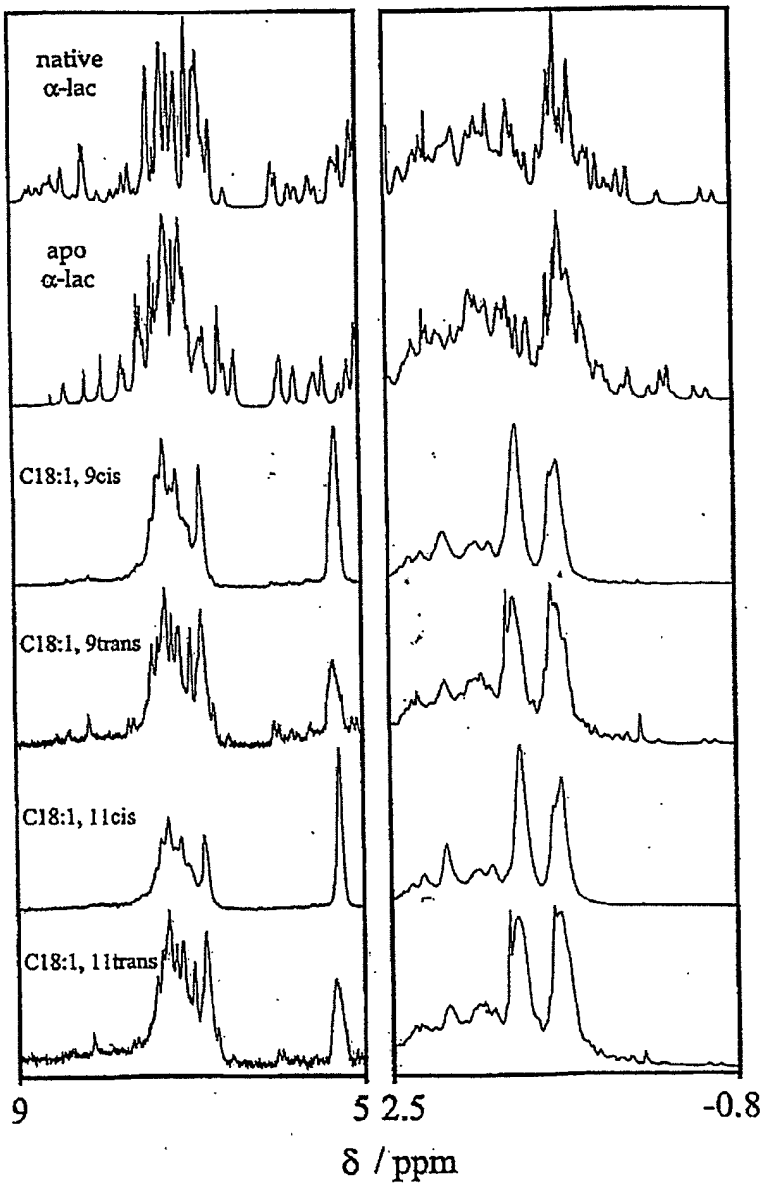
native
α-lac
apo
α-lac
C18:1, 9cis
C18:1, 9trans
C18:1, 11cis
C18:1, 11trans
9
5
2.5
-0.8
δ / ppm

Figure 6

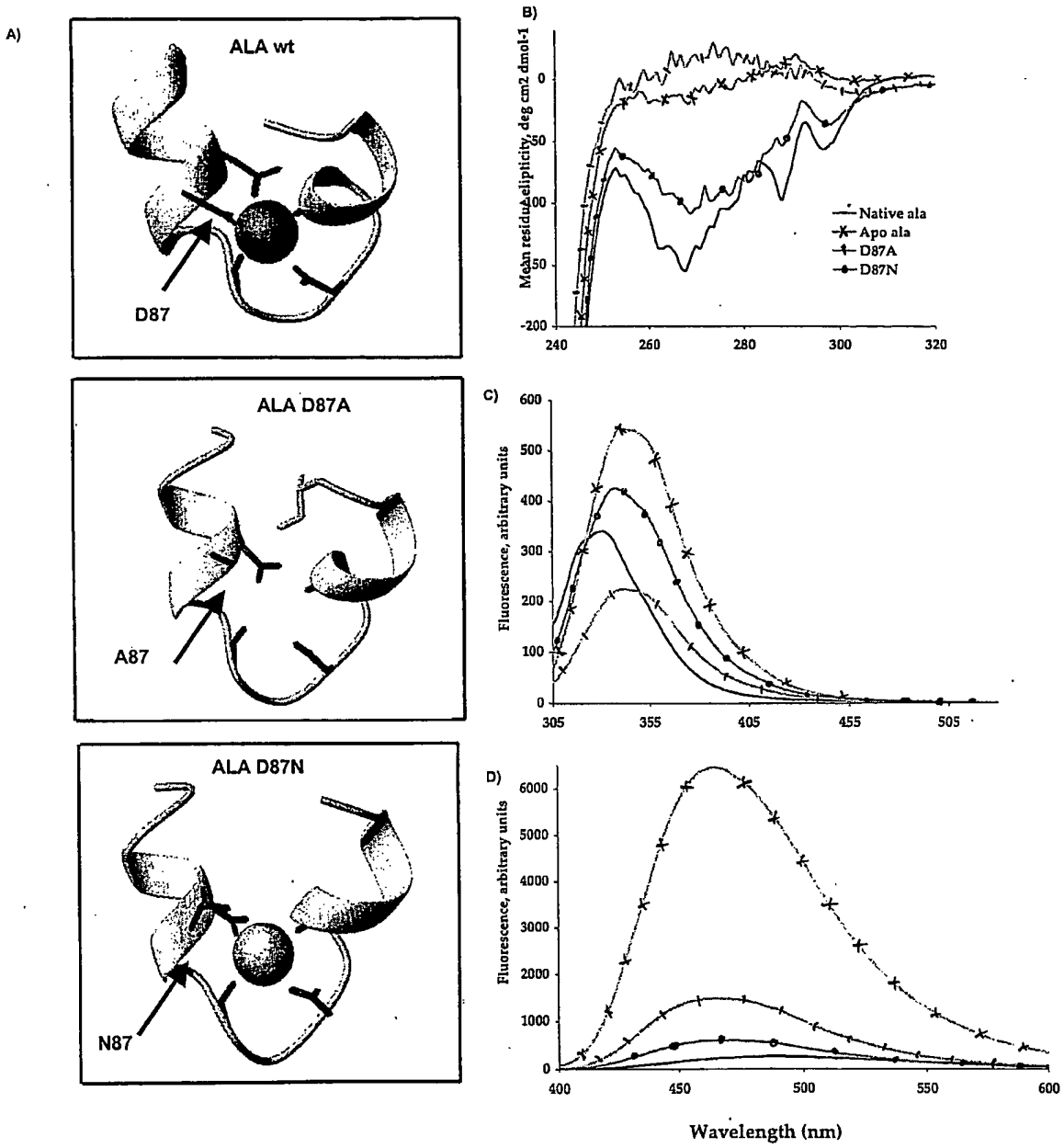
A)
ALA wt
D87
ALA D87A
A87
ALA D87N
N87
B)
Mean residue ellipticity, deg cm2 dmol-1
0
-50
-100
-150
-200
240
260
280
300
320
Native ala
Apo ala
D87A
D87N
C)
Fluorescence, arbitrary units
600
500
400
300
200
100
0
305
355
405
455
505
D)
Fluorescence, arbitrary units
6000
5000
4000
3000
2000
1000
0
400
450
500
550
600
Wavelength (nm)

Figure 7

10/506903

B)

A)

Table I. The viability of L1210 cells after treatment with various forms of α-lactalbumin.

	Cell viability (%)
Medium control	98
α-lactalbumin*:	
native	99
D87A	99
D87N	97
HAMLET†	4

* the concentration was 1.0 mg/ml
† the concentration was 0.3 mg/ml

Figure 8

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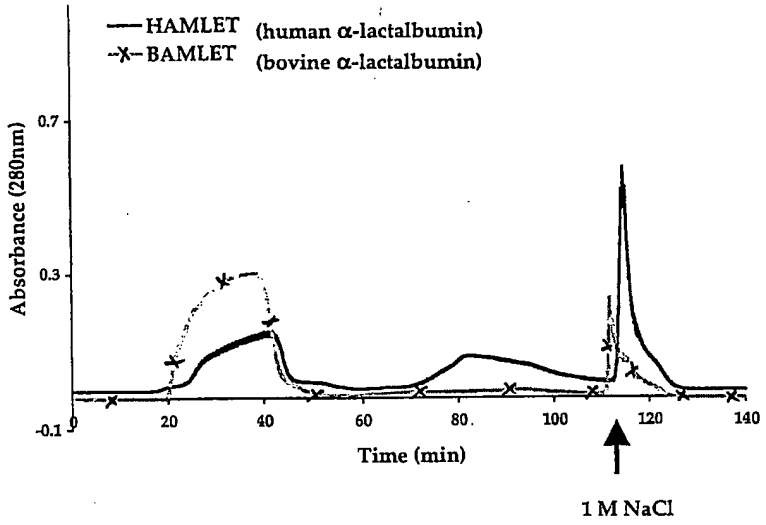
A)



B)

Table II. Viability of L1210 cells after treatment with BAMLET and HAMLET.

	Cell viability (%)
Medium control	98
HAMLET	
0.2 mg/ml	67
0.3 mg/ml	9
BAMLET	
0.2 mg/ml	76
0.3 mg/ml	8

C)

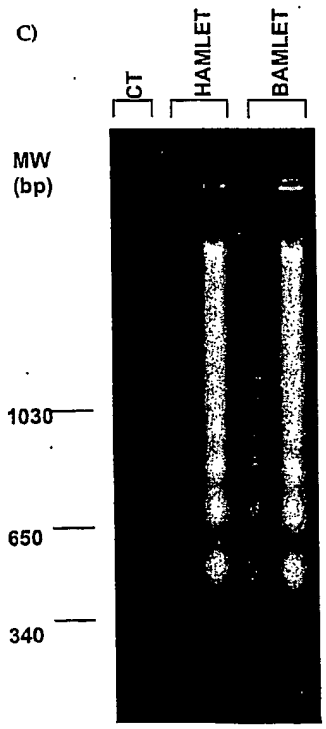


Figure 9

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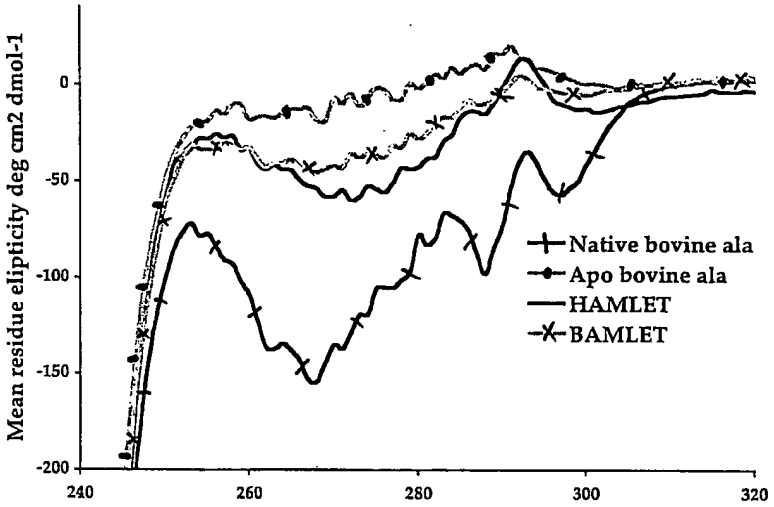
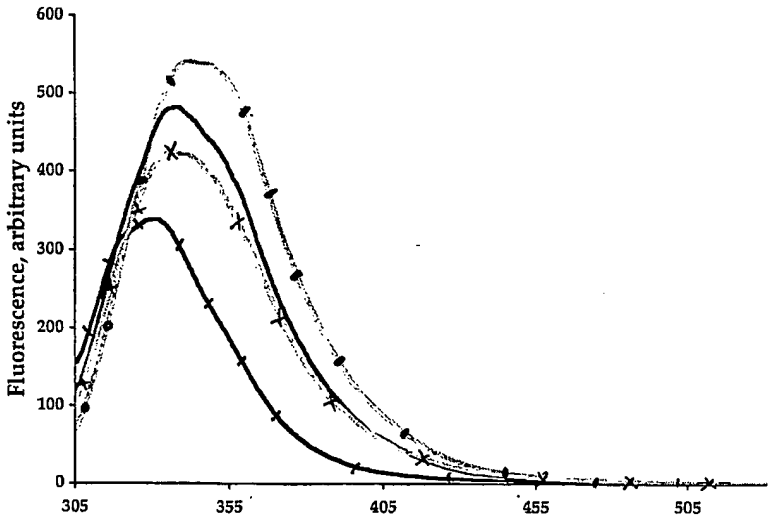
D)



E)



F)

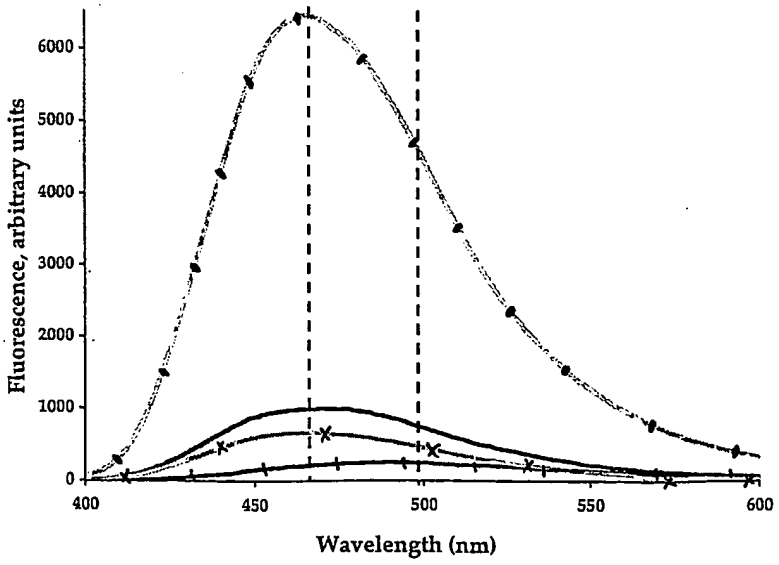
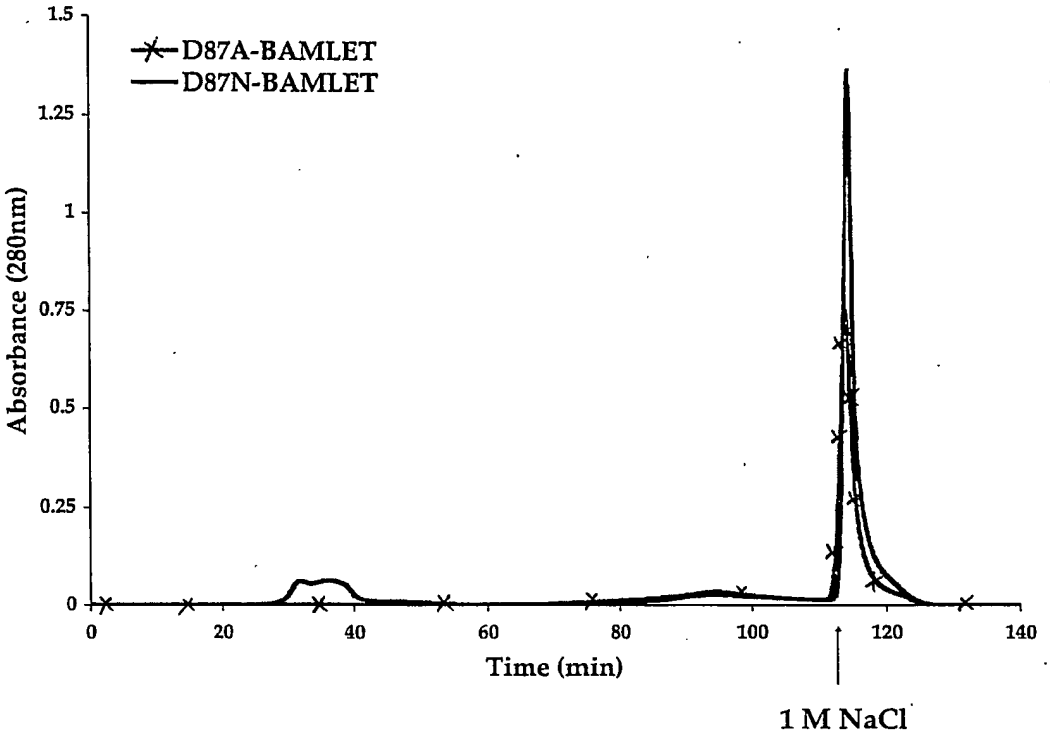


Figure 9 con't

A)



B)

Table III. The viability of L1210 cells after treatment with D87A- and D87N-BAMLET.

	Cell viability (%)
Medium control	98
α-lactalbumin*	
native	97
D87A-BAMLET	13
D87N-BAMLET	17
BAMLET†	0

*the concentration was 0.5 mg/ml
†the concentration was 0.3 mg/ml

C)

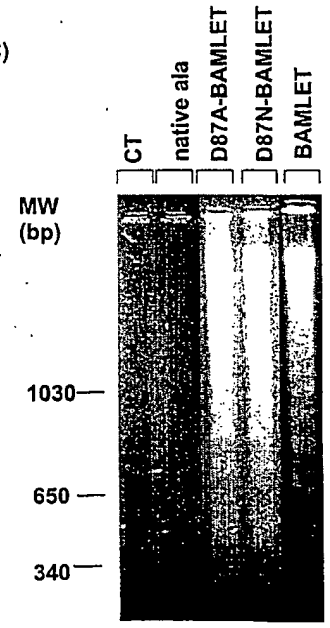


Figure 10

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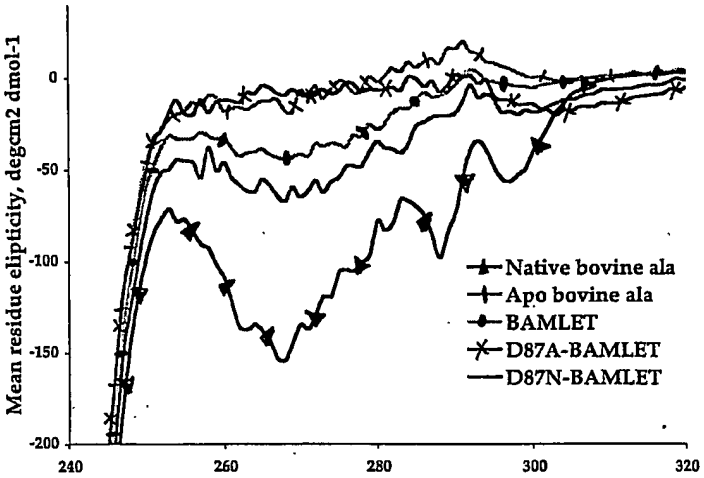
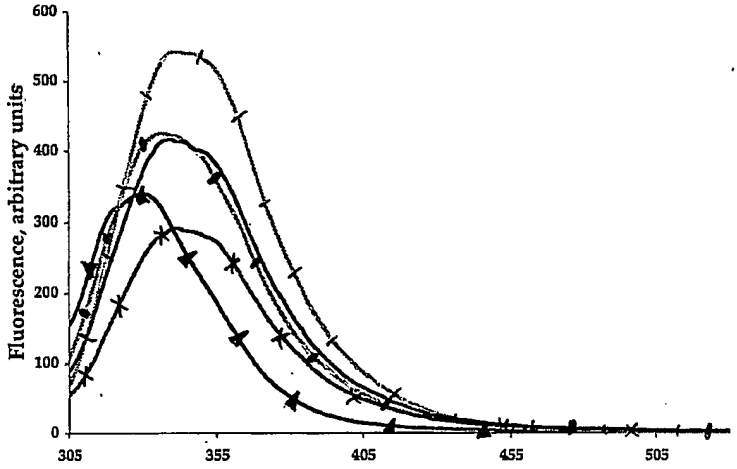
D)



E)



F)

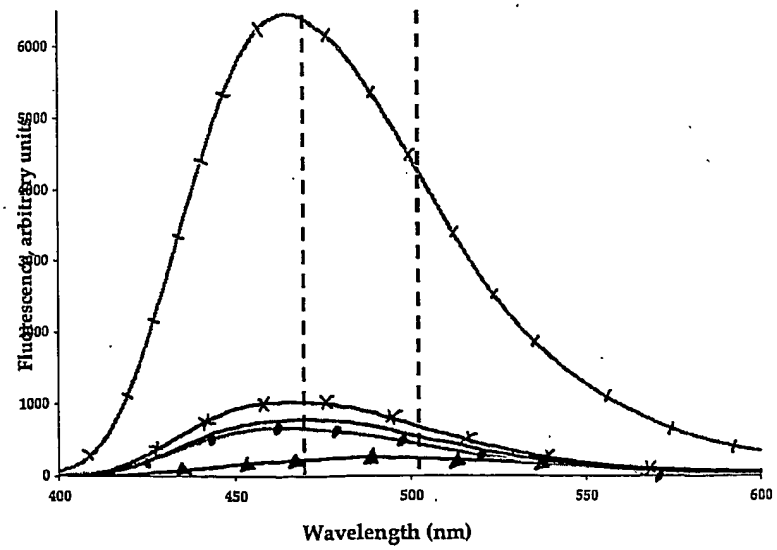


Figure 10 con't

10/506903

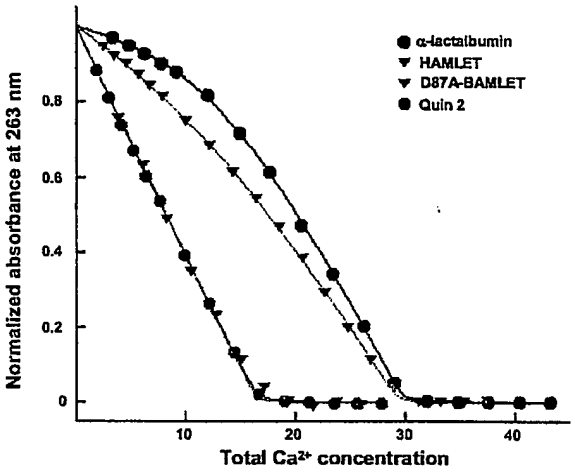


Figure 11